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10/003,829	12/06/2001	Yoshihiro Ueno	2001-1708A	7132

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EXAMINER

MILLER, BRIAN E

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/003,829

Applicant(s)

UENO ET AL.

Examiner

Brian E. Miller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 2-4 and 8-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 5-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-16 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/06/01.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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Claims 1-16 are pending.

***Election/Restrictions***

1. Applicant's election without traverse of Species (1), i.e., claims 1, 5-7, in the reply filed on 9/1/04 is acknowledged.

2. Claims 2-4, 8-16 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim.

Election was made **without** traverse in the reply filed on 9/1/04.

***Drawings***

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the sloped face being a "curved face" as recited in claim 7, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement

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Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

4. Claims 1, 6-7 are objected to because of the following informalities: (a) claim 1, line 14 the language “from end on air outlet side” is grammatically confusing; (b) claim 1, line 16 the language “to at least one of ends at” is also grammatically awkward; (c) claim 1, last line the language “toward end thereof” is also grammatically awkward; (d) claim 6, line 1 (and similarly for claim 7, line 1) the language “from end on air outlet side” is also grammatically awkward; (e) claims 6 & 7 last 2 lines of claim, appear to be redundant with respect to claim 1. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 5-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. (a) claim 1, lines 14-17, the language “extended from end on air outlet side...and said disk outer edge side” is misdescriptive. No specific “ends” have been defined for the

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“negative pressure generating recess”, the “air outlet end section”, the “disk inner edge side” and the “disk outer edge side” thus it is difficult to ascertain the limits of the recited sloped face.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1, 5-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Iwasaki (US 6,643,100). (As per claim 1) Iwasaki discloses a magnetic head slider (11), as shown mainly in FIGs. 3 & 4 including: a front surface (F) opposing a disk-formed recording medium; an air inlet end section (L); an air outlet end section (T); a disk inner edge side (11c); and a disk outer edge side (11c); wherein said front surface includes: a positive pressure generating section (14); a negative pressure generating recess (13); a head (12) for performing at least one of recording operation and playing back operation on said disk-formed recording medium; and a \*sloped face 11a extended from end on air outlet side of said negative pressure generating recess to at least one of ends at said air outlet end section, said disk inner edge side, and said disk outer edge side and arranged such that distance thereof from said disk-formed recording medium, while said head slider is steadily afloat over said recording medium, becomes gradually larger toward the end thereof (as depicted in FIG. 4);

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(as per claim 5) wherein said positive pressure generating section is formed of: two side rails (part of 14-both of which extend longitudinally along the slider as shown in FIG. 3) disposed at a predetermined distance from each of said disk inner edge side (11c) and said disk outer edge side (11c) so as to be extended from said air inlet end section (L) to said air outlet end section (T); and a cross rail (indicated as 14) having main portion thereof disposed at a predetermined distance from said air inlet end section and arranged perpendicularly to the air inflow direction and having both end portions thereof connected with said two side rails; wherein said negative pressure generating recess (13) is constituted of a portion of lower-leveled face surrounded by said positive pressure generating section and a flotation improving face (front portion of ABS 14), which is formed, separately from said positive pressure generating section, in a central portion toward said air outlet end section;

(as per claim 6) wherein said sloped face is a planar face (FIG. 4) extended from end on air outlet side of said negative pressure generating recess to the air outlet end section and adapted such that distance from said disk, while said head slider is steadily afloat over said disk, becomes gradually larger toward the end thereof;

(as per claim 7) wherein said sloped face is a curved face (see col. 6, lines 33-35) extended from end on air outlet side of said negative pressure generating recess to at least one of ends at said air outlet end section, said disk inner edge side, and said disk outer edge side and adapted such that distance thereof from said disk, while said head slider is steadily afloat over said disk, becomes continuously larger toward the end thereof.

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9. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

10. Claims 1, 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuroda (US 5,299,079). Kuroda discloses a head slider 8, as shown mainly in FIGs. 4 & 7, a front surface opposing a disk-formed recording medium; an air inlet end section (adjacent surfaces 16); an air outlet end section (adjacent surfaces 17); a disk inner edge side and a disk outer edge side (as defined in FIG. 1); wherein said front surface includes: a positive pressure generating section 14; a negative pressure generating recess 19 (see col. 4, lines 3-6, 29-31); a head 15 for performing at least one of recording operation and playing back operation on said disk-formed recording medium; and a sloped face 22 extended from end on air outlet side of said negative pressure generating recess to at least one of ends at said air outlet end section, said disk inner edge side, and said disk outer edge side and arranged such that distance thereof from said disk-formed recording medium, while said head slider is steadily afloat over said recording medium, becomes gradually larger toward end thereof (see also FIG. 7);

(as per claim 6) wherein said sloped face is a planar face extended from end on air outlet side of said negative pressure generating recess to the air outlet end section and adapted such that distance from said disk, while said head slider is steadily afloat over said disk, becomes gradually larger toward the end thereof.

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuroda.

For a description of Kuroda, see the rejection, supra. Kuroda is silent as to the sloped face being of a curved shape, however, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the linear (planar face) of the tapers 22, to have been curved. The motivation would have been: lacking any unobvious or unexpected results, the change in shape of the tapered surface would have resulted through routine engineering optimization and experimentation, so as to optimize flying characteristics of the slider.

***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure including US Reissue Patent to Chapin (35,800) and JP Patent Application (11-185418) each of which are cited to show tapered trailing end portions.




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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian E. Miller whose telephone number is (703) 308-2850. The examiner can normally be reached on M-TH 7:15am-4:45pm (and every other Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Brian E. Miller**  
**Primary Examiner**  
**Art Unit 2652**

BEM  
November 24, 2004